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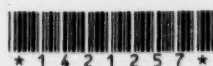
What is the value of official statistics and how do we communicate that value?**Integrated strategies and activities to communicate
the value of official statistics****Note by the Turkish Statistical Institute***Summary*

This paper considers how to increase the value of official statistics through their increased use. Activities enhancing the reliability and usefulness of official statistics are expected to add value to statistics. Firstly, national statistical offices should consider ways to improve and maintain public trust towards official statistics. The next step should be to better understand users of statistics who have different characteristics and varying data needs. These differences of each user group should have an influence on the measures taken by statistical offices. It is a challenge but the good outcome would be valuable for national statistical offices.

This paper discusses some views and strategies and shares the experience of the Turkish Statistical Institution obtained during the preparation and implementation of a communication and dissemination strategy.

The paper is presented for discussion to the Conference of European Statisticians seminar on "What is the value of official statistics and how do we communicate that value?"

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I. Introduction

1. Official statistics are used by policy makers, government decision makers, researchers, media, financial and business world, and finally by individuals. Using official statistics adds value to the society, and its economy and culture. Perhaps the value of official statistics can be best rated by the extent of their use in society.
2. Communicating the value of official statistics to the community is expected to promote use of official statistics. That will further help the society to be more tolerant to the burden imposed on respondents during data collection process. So, it seems that communicating the value of official statistics has a positive effect both for statistical production and the use of statistics. The Turkish Statistical Institution (TurkStat) has learned two simple but important lessons regarding better use of statistics. First, an NSI (NSI) should be widely known and trusted. Secondly, the better official statistics are served; the more and efficiently they are used. These two issues have much deeper meaning than first appears. Therefore, an NSI should have a well-planned dissemination and communication strategy in the first place.
3. TurkStat defined a number of activities to react to the above mentioned concerns. These activities are expected to help to communicate the value of official statistics. The activities include building trust by organizing focus group meetings, providing clear and easily accessible descriptions of production methods, explaining the procedures for corrections of statistical figures and using an official statistics logo in the releases. Activities aiming at improving the response to user needs also include preparing a tailor made dissemination model for providing publications also at the province level, using special press releases to get the attention of the media and releasing publications focused on special occasions. The important actions also include redesigning the institution's website, promoting access to microdata and using social media to increase the reach of official statistics. All of these activities are expected to increase the respect and interest of people towards official statistics.

II. Issues and challenges

4. Data providers range from an individual which is the smallest statistical unit, to the public institutions from which country-wide business registers are obtained. In addition, data providers can in many cases be also data users. Thus, an NSI is at the center of a very crowded data traffic and communication world. There are several issues and challenges in this data traffic relating to communicating the true value of official statistics.
5. An NSI should be well known to the society and also be recognized by society. TurkStat has noticed recently that its users and respondents are more distant than expected. Only a small part of society knows Turkstat. Most people do not know the institute, are not aware of its existence; they don't know what Turkstat does and how. The general public has limited knowledge about the fact that their life is not only the source of statistics but also very much affected by statistics. But, how can we close this gap? Should statisticians wait until people find statistics by chance, or should statisticians show the way and lead users to official statistics? An NSI has to be proactive about these issues. There is a clear need of analysing users and respondents who have various needs with different specificities. Different user needs may require different approach. The operational steps of being visible to the society should be planned carefully in order to create and maintain a good reputation. Here, transparency and accountability are the two main values an NSI should provide to the users. It is clear that people cooperate more and provide data easily when they trust the national statistical office.

6. Understanding the actual needs of users is another issue. Can we expect user needs to be satisfied by the standard services provided? Is it too difficult to provide the statistics as users want them? Could some of the statistics be more interesting if they were served in another way or with other dimensions? Can statisticians guess what users need and be ready when statistics are needed? All of these questions refer to another set of important challenge and the solutions require a lot of work.

III. How to increase trust towards a national statistical institute?

7. There could be a number of activities to create trust towards an NSI and its official statistics. The following text describes several of these important activities in more detail.

A. Focus group meetings

8. Establishing and maintaining good communication with users and respondents is crucial for an NSI. Each target group might have their own way of communication. An NSI should be patient enough to visit representatives of each group in order to both promote official statistics and listen to what users want. The messages conveyed in the meetings and the materials used may differ based on the user group. It might be less probable to have visitors from parliament in the office, whereas many press members would desire to see the inside of the NSI. Some government departments, agencies and Ministries are active users of statistics while they are also producers of administrative records. Therefore, organizing working group meetings with them could be helpful in support of the coordination role of an NSI. Good cooperation with the scientific community will enhance the use of statistics by the academia and create a platform for methodological developments. Media, meanwhile, should not only be treated as a target group but also as an important and efficient partner for reaching other users of statistics. Periodic meetings with the media are, therefore, crucial. Last but not the least, meetings with civil society and nongovernmental organizations should not be overlooked. Meetings could be very good platforms for transmitting messages and describing the principles of practices, as well as receiving important feedback.

B. Accessible production methods

9. NSIs need to establish well designed production processes in order to be reliable and consistent. The methods should be clear and their descriptions (i.e. metadata) easily available. It would be difficult to sustain trust while not trusting users with the metadata. Clarity and transparency creates a more trustful environment for users including researchers. This in turn will ensure the determination of any possible inconsistency or error. Harmonization and standardization of the metadata in each process of statistical production still remains a challenge for NSIs. Since managing metadata needs an integrated approach, NSIs should capture all the related documentation in statistical process. The user must be able to access metadata easily. Easily accessible and understandable data will critically contribute to the use of statistics in society.

C. Clear procedures for the correction of errors

10. An error-free environment would be a dream for an NSI. However, trying to achieve it is next to impossible and would be costly. Instead, an NSI should have clear procedures in place in order to manage and correct errors. Errors need to be processed as soon as they are detected; and an error should be corrected even if the data are already disseminated.

Although declaring the existence of an error disturbs the reputation of an NSI; the cost of hiding an error is even worse and could sometimes be fatal. Statistics may sometimes include an error and society has the right to know about these errors and their corrections. The best approach is to have a regulation about what to do when an error is identified. TurkStat's regulation for the management of errors classifies errors into two groups. Minor (non-misleading) errors may or may not be corrected depending on the case. Major errors on the other hand require correction as well as a declaration to the public about the reason of the error. All errors are recorded for administrative and statistical purposes. Having the errors declared and providing statistics on errors is a sign of self-confidence for an NSI. TurkStat has made announcements to the public about a few errors since the regulations came into effect in June 2012.

D. Official statistics logo

11. Since official statistics are increasingly competing against other sources of information, a distinctive sign for official statistics has become necessary. Data produced by institutions and organizations within the framework of an official statistics programme are considered official statistics and are usually denoted by a badge. However, in order to create value around the official statistics logo, TurkStat decided that official statistics must also fulfill a set of quality requirements (existence of metadata, timeliness etc.) in order to earn this badge. As the coordinator of official statistics in Turkey, TurkStat believes in the motivating power of the badge for a better quality in statistical production.

IV. How to make official statistics more widely used?

12. Today Internet is accepted as being the basic and the most effective dissemination tool. However, placing statistics on the web does not guarantee that users are going to use them. TurkStat is aware of this fact and looking for steps to deal with the issue. Several special services and products are being created and made accessible to the users. Analyzing and classifying users have showed us that each user group may require different products and use statistics through different media tools. Aiming at being a user oriented NSI, TurkStat has developed several tailor made solutions for the target user groups.

A. Tailor made dissemination of news releases and publications

13. An NSI should pay attention to informing the society about the scope of official statistics. This can be done by improving communication with users and finding tailor made solutions for target user groups. Official statistics are used by many different user groups each having somewhat different data needs. Finding new presentation methods special to each user group may help to promote the use of statistics. To this end, TurkStat developed a model to increase the use of official statistics across the country. The model is based on preparing various information packages according to user needs. Users can basically be grouped into two categories: users at the national level and users at the local/provincial level. There are also other classifications such as administrators, press members, academics, non-profit organizations and the business community.

14. TurkStat sends localized or specially prepared custom packages to its group of users every day. The staff of 26 regional offices with a team in the central office carry out the operation. A total of 4,000 individuals from different target groups are informed by almost 27 different version of the same press release. The feedback was excellent; many positive comments, especially from local authorities, were received and many people contacted the central office as well as the regional offices to get involved in the system. Starting in 2014,

the model has been fully implemented all over the country. TurkStat recognized that localized and specialized information attracts much more attention from users. There was not any less data on the website before this dissemination model created. However, many of the users simply did not know where to find the pieces of information before the information was made visible for them.

B. Selected indicators by provinces

15. It has become clear that regional statistics are needed. Therefore, preparing and disseminating printed or electronic books with statistical indicators at a province level attract a lot of attention of local users. For this purpose, TurkStat prepares since 2012 "Selected Indicators by Provinces" series annually for every province in Turkey. The publications which include many visual graphical representations are also prepared electronically; and a tool has been developed for the website to access and download the whole set of indicators. With this tool, pdf publications were made accessible through geographic locations of provinces on the map of Turkey. In addition, a flash disk was designed as a mobile electronic version. The products were submitted to local government units as well as journalists. Positive feedback was received saying that "this was the first time all necessary figures were found together". No new data was created, the package just provided the same statistics in a different way, in the way that users needed.

C. Publications for special occasions

16. Another good way to uplift current statistics could be by preparing publications for special occasions. Bringing statistics together around a subject like women, children, etc. could create an interesting publication for users. Since 2012, TurkStat started preparing publications and press releases for special occasions such as June 5, the World Environment Day, and July 11, the World Population Day, etc. Moreover, TurkStat publishes thematic publications for special population groups with the purpose of enhancing the series of press releases and publications. Other examples are Statistics on Children (April 23, National Sovereignty and International Children's Day), Statistics on Family (13-19 May, Family Week), Youth in Statistics (19 May, Commemoration of Atatürk, National Youth and Sports Day), Women in Statistics (March 8, International Women's Day) and Elderly Statistics. The current and future demographic structures and socio-economic characteristics such as education level, marital status, income, family life, employment status and life satisfaction are provided as press releases and publications. Target user groups for each publication are determined prior to the production in order to disseminate the products directly to the target users by delivery services.

D. Press room and special press releases

17. As stated earlier, press and media are vital partners for NSIs. The more they use official statistics, the more the community becomes aware of statistics and uses them more too. Media owns the toolset by which the value of statistics can be most efficiently and effectively communicated. It is worthwhile designing a special space on the web site for media, so they do not get lost among hundreds or thousands of tables and complex databases and metadata. The press room should also include news about methodology changes, activities of NSI and error announcements as well. Using these arguments TurkStat turned its outdated statistics press room into a fresh and more dynamic corner for media.

18. Media usually looks for news ready to print. They need statistics to be turned into knowledge and supported by easily readable graphs. National and international data comparisons usually add value. These "ready to use" news in fact ensure having a place in media more often and in people's life on a daily basis. In this context, TurkStat lately started to disseminate special news releases. They are prepared by using the currently disseminated statistics from which interesting findings are pointed out. Special press releases are submitted to the press room at 11:00, after the standard news releases take place at 10:00. An example of a special press release is given in the annex.

E. Redesigning the website and new innovative visualization tools

19. Disseminating enormous amounts of information through Internet is although effective, quite challenging. Millions and billions of data and related metadata should be sorted out to create simple packages of information, for people who do not like to wait for more than a second. Therefore, most NSIs struggle in creating efficient websites. If a user waits for the pages more than a couple of seconds on every visit, the user might lose interest. Therefore, the main objective should be to make the pages more user-friendly and to make them easier to navigate. Statistics should be provided in a step by step logic instead of putting everything on a single page. TurkStat deployed the new website in July 2013. The initial feedback of the frequent users on the website was that the previous website was easier to use. Current evaluations, however, showed a change. Users think that it is much easier now to find what they want and download it. TurkStat analyses the use of its website with a User Satisfaction Survey as well as through individual messages sent by users. In fact, it should be noted that creating easy to use communication channels resulted in an increase in the number and content of feedback.

20. In the digital age, the ability to explore the visual representation of massive data and to detect meaningful patterns and trends is becoming more popular. Readers can easily understand visual representation. Data visualization lets people look at vast quantities of data quickly and efficiently, and can help to improve understanding of statistics. These new data dissemination techniques may upgrade people's perception of official statistics. For that purpose, TurkStat is working on developing new visualization tools such as infographics and animation films. In this context, TurkStat had three animation films created by a professional firm. The series of movies were prepared around an ordinary "Family of Trust" who faces official statistics in their daily life. The projects regarding infographics and animation films will help to improve the diversity of communication channels and products which will add more value to official statistics.

F. Promoting access to microdata

21. Providing access to microdata is a key challenge for all NSIs. While some national considerations remain, particularly concerning the legal framework, there has been considerable progress over the past ten years to find new ways to provide microdata. The main reason – and often the only explicit reason – why data producers share their microdata is to support research. Access to microdata and the related analysis helps society to have insight into and a much better understanding of social and economic issues.

22. Microdata should be supported with good quality metadata for users to make good analysis. Turkstat provides access and facilities for using microdata to researches in accordance with the legislation and based on the demand of national and international researchers. TurkStat has prepared a regulation defining the rules to access and use microdata. Researchers have to go through an accreditation procedure in order to gain the right to access data. Microdata are classified into two groups. The first group consists of on-

site access microdata, which includes data on businesses and foreign trade. This type of data is permitted to be accessed only in Data Research Centers located at the central office and the five regional offices. Because of data confidentiality concerns, these outputs cannot be taken out without being examined by the staff. The second type of data in Group B covers data from household surveys. These data are distributed on compact discs (CDs). TurkStat is searching for possibilities to offer remote access to users of these data.

G. Social media

23. NSIs also use social media to distribute statistical information, to promote the use of statistics and to increase statistical literacy. In most cases social media is seen as a tool for increasing the use of statistical information in society, and for reaching as wide audiences as possible. By providing official statistics through networks and mobile devices an NSI could create an image that it is both user oriented and adapted to advanced technological tools. TurkStat is aware of the importance of social media. However, it is also important to clarify the objectives and rules for using social media for official statistics. The number of followers of TurkStat in Twitter is nearly 14,000. The number of likes in Facebook is about 6,000. Social media can be a very useful tool for dissemination and discussion of statistics, as it offers tailor-made solutions for reaching individuals interested in official data.

H. Official statistics programme portal

24. NSIs, although being in the center of official statistics, are not the only producer of statistics. Many other government institutions also produce statistics. Users of official statistics sometimes struggle in finding the correct address for certain statistics. There is, therefore, a clear need for a central access point for all official statistics. This will not only make the life easier for users but it would also promote the recognition of the "official statistics" concept. This may also be a good tool for better cooperation among involved institutions and can help to improve quality of statistics. Turkstat recently finished the design and development of the web site www.officialstatistics.gov.tr. The site is now open for testing by the partner institutions. In addition, TurkStat plans to make use of this platform as a base for the application tool of "Inventory for international data dissemination".

V. Conclusions and recommendations

25. Value of official statistics can be best rated by the amount of use. Therefore, use of official statistics should be promoted so that it becomes more wide spread. If statistics are both reliable and easily available they should be used more by society.

26. Reliability can be improved by creating trust towards the NSI and official statistics. Users should know and trust the NSI. An NSI should know their customers before describing its goals. User groups as well as responders should be defined and each should be analyzed for their needs and behaviors. Then an NSI can be active towards users and explain what the NSI and the official statistics are about. Its products and services should also be trustworthy. In order to achieve this, official statistics should be produced according to international standards (e.g. Fundamental Principles of Official Statistics and European Statistical System Code of Practice). Users should be convinced that the NSI would not hide information regarding methodologies applied or errors. Besides, introducing a badge for official statistics as a measure of quality could enhance users' confidence. All of these activities are aimed to help the community to be aware of the existence and reliability of official statistics.

27. Easy availability of statistics to users is crucial for the wide spread use of statistics. Availability, however, should not be treated in its classical, technical meaning only. Availability means making data accessible and presenting the data in a way which is customized according to users' needs. It involves an analysis of users and may lead to the development of very interesting products based on existing data. Specialized forms of news releases and regional statistics as well as special publications are examples of this kind. Official statistics are consumed better when they are tailored to match users' needs. Therefore, a special website providing access to all official statistics is a nice facility for users. It will also play an essential role in the coordination of activities among official statistics producers. Although such a website would be complex in terms of the amount of information, it has to be as simple as possible. Because having a simple and accessible website is much more powerful than a complex one. The simpler the page the easier and more users it can serve. Social media is another platform for NSIs' visibility, but being responsive online may require quite a lot of effort. Finally, access to microdata has become more important and it attracts researchers with a potential to provide society with interesting analysis.

28. NSIs should look for intelligent, technological approaches for the production and dissemination of official statistics. All of the activities should be guided by a communication and dissemination strategy, and the progress should be carefully monitored. These tools should help NSIs on their path towards improving the use of official statistics and creating and communicating the value of official statistics to the public.

Annex 1 Example of a special press release



**TURKISH
STATISTICAL INSTITUTE**

News for Press Room

Available only in Turkish

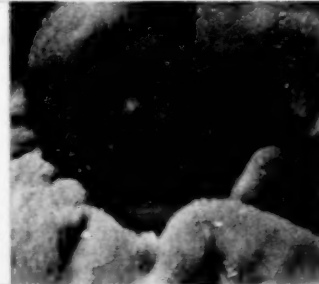
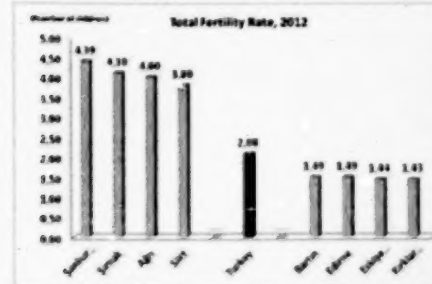
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3 February 2014

In Turkey, while 146 babies are born every hour, 2 infants are died

According to the World Bank data, while 15 000 babies are born every hour, 120 infants are died in the world. In Turkey, while 146 babies are born every hour, 2 infants are died, as well.

In Turkey, women gave birth average 2.08 children according to the 2012 data. When the average number of children of woman giving birth is analyzed by provinces, the highest value is seen in Şanlıurfa with 4.39 children. Şırnak with 4.1 children, Ağrı with 4 children and Siirt with 3.8 children follow Şanlıurfa. The province which had the lowest average number of children was Kırklareli with 1.43 children. Eskişehir with 1.44 children, Edirne and Gartın with 1.49 children follow Kırklareli.



According to the 2012 data, approximately 11.6 babies die before their first birthday in Turkey. 65.9% of infants die before completing their first month. When infant deaths are examined by provinces, the highest infant deaths are seen in Malatya. 19.5 infant deaths per 1,000 live births were occurred in Malatya. Ağrı with 18.1 deaths, Bingöl and Siirt with 17.6 deaths follow Malatya. The lowest infant death was seen in Kırklareli. 6.1 deaths per 1,000 live births were occurred in Kırklareli. Bayburt with 6.3 infant deaths, Kırşehir with 7.1 infant deaths and Gümüşhane with 7.5 infant deaths follow Kırklareli.



Source: 1. TurkStat, Birth Statistics, 2012
2. TurkStat, Death Statistics, 2012

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http://www.tuik.gov.tr/PreTablo.do?alt_id=1080

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Migration statistics**Use of population censuses to collect statistics on
international migration****Prepared by the United Nations Statistics Division***Summary*

The paper examines national practices in collecting international migration statistics, by reviewing questionnaires the United Nations Statistics Division collected from the 2010 round of national population and housing censuses. It also provides an overview of the availability of migration statistics collected from censuses at international level and discusses challenges and opportunities of using census as a source of data on international migration.

The paper is presented for discussion to the Conference of European Statisticians seminar on migration statistics.

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I. Collecting international migration statistics from population censuses

1. Population census is a primary source of measuring migrant stock. Most countries collect and produce statistics on the stock of foreign-born and foreign population from population censuses. It is also possible to compile statistics on migration flows through population censuses by using information on change of residence. The use of two consecutive censuses to derive migration flow data for the interim period is well documented as well.

2. In the 2010 census round (2005-2014), 206 countries and areas out of a total of 235 (87 per cent) conducted a population census at least once. This paper is based on analysis of census questionnaires that are available for 148 countries and areas.

A. Collecting information on United Nations core international migration topics

3. The United Nations recommends that three core topics on international migration to be collected in a population census and they are country of birth; citizenship and year or period of arrival.¹

4. The information of "country of birth" is usually collected by the question on place of birth, to capture the district or province (or other geographic division detail) if the person is born in the country, or the country of birth if the person is born abroad. Some countries/areas also ask the place of residence of the mother when the person was born, rather than the place of birth per se. This practice is followed to keep the place of birth of the person from being ascribed to the locality where his or her mother actually gave birth (where the hospital or health facility is located).

5. There is wide variation among countries in the way in which the question on citizenship is asked and in the degree of response space. Some countries (Australia, Democratic People's Republic of Korea, Maldives and South Africa) asked only whether the person is a citizen or not (i.e., a foreigner). The vast majority of countries ask for the person's country of citizenship if he or she is not a citizen of the country of enumeration, as recommended by the United Nations. Some countries that ask the question on citizenship include a category "stateless" or "without citizenship" in the pre-coded responses to ensure that this group of persons is categorized correctly. In many countries (mostly in Europe), the citizenship question allows the recording of a second country in the case of dual citizenship by providing a space for entering the name of the other country of citizenship. Some countries also included a question to allow distinction between citizens by birth and citizens by naturalization.

6. Another area of policy interest is to distinguish between recent migrants and those of longstanding. The United Nations recommends that year/period of arrival at the country be collected for persons born abroad. In national censuses, the question may be asked to foreign-born persons only or to persons who have lived abroad if returned migrants are also of policy interest. Whether the year or period refers to the most recent or the first arrival is not prescribed in the Recommendations and is left for countries to choose.

¹ Principles and Recommendations for Population and Housing Censuses, Rev. 2, United Nations, 2008

7. Table 1 shows the number and percentage of countries that asked questions on these three core topics. Of all the countries for which questionnaires are available for the 2010 round of population censuses, 96 per cent collected information on either on the country of birth or citizenship and 51 per cent on year or period of arrival. Country of birth is collected in more countries (88 per cent) than country of citizenship (76 per cent). There are, however, regional differences in the type of questions asked in population censuses. Country of birth is asked much more often than citizenship in North America, South America and Oceania, while in Africa, Asia and Europe citizenship these two topics are equally covered.

8. The coverage of year and period of arrival also varies by region. In North America, South America and Europe between 70 per cent and 80 per cent of the countries/areas under review asked question on year or period of arrival. The percentage is much lower for Africa and Asia. More than half of the countries/areas in Oceania asked question on period/year of arrival.

Table 1

Number and per cent of countries/areas covering the United Nations core topics on international migration, 2010 population census round

Region	Total countries	Country of birth		Citizenship		Country of birth or citizenship		Year/period of arrival	
		Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent
Africa	30	25	83.3	26	86.7	29	96.7	7	23.3
America	24	22	91.7	12	50.0	22	91.7	20	83.3
North									
America	10	10	100.0	5	50.0	10	100.0	8	80.0
South									
Asia	33	24	72.7	24	72.7	30	90.9	7	21.2
Europe	30	28	93.3	28	93.3	30	100.0	21	70.0
Oceania	21	21	100.0	17	81.0	21	100.0	12	57.1
Total	148	130	87.8	112	75.7	142	95.9	75	50.7

B. Collecting information on other international migration topics

9. Other international migration questions that have been asked in national population censuses include emigration of former household members; returned migrants; country of births of parents and previous residence abroad.

1. Emigration of former household members

10. Countries with high emigration rates are increasingly including questions on emigration in their censuses. The 2010 round of censuses witnessed a significant number of countries and areas (50) that have asked questions about former household members that are "emigrants", i.e., have left the country to live abroad. A few countries specified the period of absence as a criterion when listing emigrants. More than 50 per cent of the countries and areas in Africa and North America asked questions on emigration, while 40 per cent of those in South America, 33 per cent in Europe. The percentage is much lower in Asia and Oceania (18 per cent and 5 per cent, respectively).

11. After identifying the emigrants according to the country's specifications, the questionnaire gathers a limited number of relevant information on each emigrant, including age, sex, the year of departure and the destination country. Additional information is also

asked by some countries including reason for migration and education and occupation of emigrants, among others.

2. Returned migrants

12. Thirty-six countries and areas (24 per cent) collected data on return migrants in their population and housing censuses. Return migrants can be detected through a question in the census that asks all persons (or all native-born persons) if they have ever lived abroad, and if so, when they returned to live in the country. Majority of those 36 countries are in Europe and North America. In Europe, 63 per cent of the countries and areas collected information on returned migrants. The percent is lower in North America (33 per cent). The percentage is much lower in the other regions (Table 2). The list of countries and areas for which 2010 census questionnaires are analysed is provided as Annex 1.

13. A common question that has been asked of returned migrants is the country wherein the person last resided before returning/coming to the country of enumeration. A few countries have also included a question on reason(s) for emigration abroad and/or returning.

Table 2

Number and per cent of countries/areas covering other topics related to international migration, 2010 population census round

Region	Total countries/ areas for which questionnaires are analysed	Emigration		Returned migrants		Country of birth of parents	
		Number	Per cent	Number	Per cent	Number	Per cent
Africa	30	16	53.3	2	6.7	-	-
America, North	24	13	54.2	8	33.3	4	16.7
America, South	10	4	40.0	1	10.0	-	-
Asia	33	6	18.2	5	15.2	5	15.2
Europe	30	10	33.3	19	63.3	10	33.3
Oceania	21	1	4.8	1	4.8	5	23.8
Total	148	50	33.8	36	24.3	24	16.2

3. Country of birth of parents

14. There is a growing interest in the economic, cultural and social experience of the children of immigrants who are born in the destination countries, the so-called "second generation migrants". The identification of second-generation migrants requires that questions be asked on the place of birth of each respondent as well as place of birth of his or her parents. In the 2010 round of population and housing censuses, 24 out of 148 countries and areas asked questions on country of birth of parents. Among those 24 countries and areas, 10 are in Europe, 5 in Oceania and Asia and 4 in North America.

4. Previous residence abroad

15. Collecting information on previous residence, through either a single question on the previous place of residence at a specified time in the past or a set of two questions – place of previous residence and duration at current residence, is recommended by the United Nations for the study of internal migration in population censuses.

16. Through one of the above choices, a count of persons who reported previous residence as a place abroad and moved into the country before the census date can be derived. Note that such figure does not provide accurate data on immigrants because it does not capture immigrants who died or who had departed before the census date.

17. Almost all countries and areas analysed in this study included questions on previous residence of the person (Table 3). For South America and Oceania, all countries and areas included question(s) on previous residence, in one way or another. The coverage is a little lower in Africa, North America and Asia, with about 90 per cent of the countries and areas asked the question on previous residence. Europe has the lowest percentage, with about 77 per cent of countries and areas asking the question(s).

Table 3

Number and per cent of countries/areas covering previous residence, 2010 population census round

Region	# countries/ areas for which questionnaires are analysed	Asked question(s) on place of previous residence or place of residence at a specified time in the past	
		Number	Per cent
Africa	30	27	90.0
America, North	24	22	91.7
America, South	10	10	100.0
Asia	33	29	87.9
Europe	30	23	76.7
Oceania	21	21	100.0
Total	148	132	89.2

II. International migration statistics available at international level

18. The United Nations Statistics Division collects, from national statistical offices, census data through the United Nations Demographic Yearbook questionnaires on population censuses. Data for the following 7 tables are collected:

- (a) Native and foreign-born population by age and sex;
- (b) Foreign-born population by country of birth, age and sex;
- (c) Foreign-born population (15 years and over) by educational attainment, country of birth and sex;
- (d) Economically active foreign-born population by occupation, age and sex;
- (e) Population by citizenship status, age and sex;
- (f) Foreign population by country of citizenship by age and sex;
- (g) Foreign population (15 years and over) by educational attainment, country of citizenship and sex.

19. Table 4 shows the numbers of countries and areas that have reported data to the United Nations Statistics Division on foreign-born population. Overall, 61 countries and areas (47 per cent of those asked questions on country of birth) have reported data on foreign-born population. The percentage is highest in Europe (71 per cent), followed by North America and Asia (50 per cent). In Africa, South America and Oceania, only around 30 per cent have reported data on total foreign-born population at the international level.

Table 4
Availability of data on foreign-born population, 2010 population census round

Region	# Countries asked question on country of birth	Native and foreign-born population		Foreign-born by country of birth		Foreign-born by educational attainment		Economically active foreign-born by occupation	
		Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent
Africa	25	7	28.0	3	12.0	1	4.0	3	12.0
America, North	22	11	50.0	9	40.9	6	27.3	5	22.7
America, South	10	3	30.0	2	20.0	1	10.0	2	20.0
Asia	24	12	50.0	7	29.2	4	16.7	4	16.7
Europe	28	20	71.4	16	57.1	11	39.3	8	28.6
Oceania	21	8	38.1	5	23.8	2	9.5	3	14.3
Total	130	61	46.9	42	32.3	25	19.2	25	19.2

20. Data on foreign-born population by country of birth are available at the international level for 42 countries and areas (32 per cent). Europe again has the highest percentage of reporting rate (57 per cent), followed by North America (41 per cent) and Asia (29 per cent). The rate of reporting is much lower for Oceania, South America and Africa.

21. Data classified further by educational attainment and occupation are only available for 25 countries and areas (19 per cent).

22. Among all countries and areas that asked questions on citizenship in 2010 round of censuses, 57 per cent have reported population data by citizenship status. About 80 per cent of those in Asia and Europe reported such data, while the reporting rate is much lower for other regions (40 per cent or less). When further breaking down data on foreigners by country of citizenship, the number of countries and areas that reported such data reduces to 41 (37 per cent). The number of countries and areas reported data on foreigners by educational attainment is only 20 (18 per cent) (Table 5).

Table 5
Availability of data on foreign population, 2010 population census round

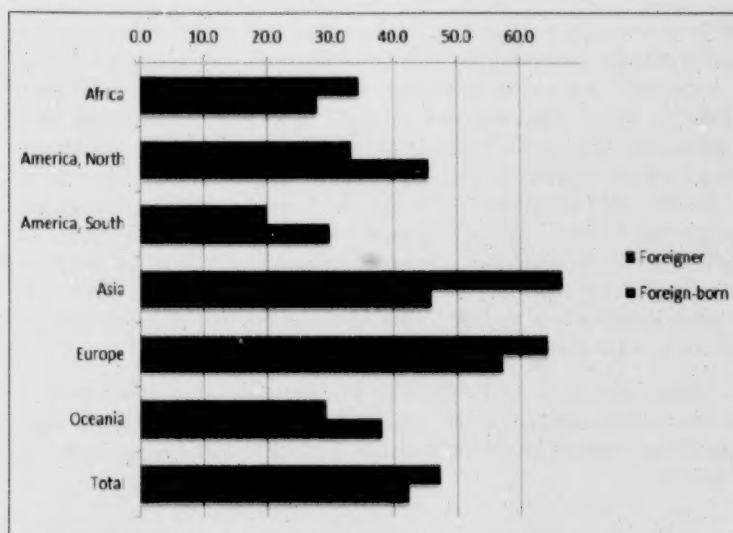
Region	# countries asked question on country of citizenship	Population by citizenship status		Foreigners by country of citizenship		Foreigners by educational attainment	
		Number	Per cent	Number	Per cent	Number	Per cent
Africa	26	10	38.5	8	30.8	1	3.8
America, North	12	4	33.3	3	25.0	2	16.7
America, South	5	2	40.0	1	20.0	1	20.0
Asia	24	19	79.2	9	37.5	4	16.7
Europe	28	23	82.1	17	60.7	12	42.9
Oceania	17	6	35.3	3	17.6	-	-
Total	112	64	57.1	41	36.6	20	17.9

23. Figure 1 illustrates the existing gap for international migration data obtained from population censuses. Ideally if a census includes question(s) on country of birth and/or citizenship, data on foreign-born and/or foreigners can be generated. However this is not always the case. For the 2010 round of population censuses, only 42 per cent of the countries and areas that included questions on country of births have reported data on foreign-born population to the *Demographic Yearbook*. Similarly in the same census round, only 47 per cent of the censuses that included questions on citizenship have reported data on foreigners.

24. The percentage of reporting varies by region, highest in Asia (46 per cent on foreign-born and 67 per cent on foreigners) and Europe (57 per cent on foreign-born and 64 per cent on foreigners) and much lower in other regions. For data on foreign-born population, the reporting percentage ranges from 28 per cent in Africa to 57 per cent in Europe. For data on foreigners, the reporting percentage ranges from 20 per cent in South America to 67 per cent in Asia.

Figure 1

Percentage of countries and areas having basic migrant stock data available to the United Nations *Demographic Yearbook*, 2010 population census round



III. Challenges and opportunities of collecting international migration statistics from population censuses

25. Population censuses have been used as a primary source for international migration statistics, especially on migrant stock. Advantages of using censuses to measure international migration are associated with the nature of population censuses. Universal coverage ensures better coverage of the migrant population. Relative uniformity in question formulations ensures better data comparability across censuses. Censuses collecting a variety of socio-demographic information imply that there is a potential for characterizing international migrants in terms of certain basic demographic and social-economic characteristics included in the census questionnaire.

26. On the other hand, censuses have a number of limitations in measuring international migration. First, data are less frequently available, usually once in ten years. This limits the

capability of population census in assessing recent migration patterns, which is the key interest of policy makers. Second, because censuses can accommodate only a limited number of questions related to migration, they cannot provide the detailed information needed for a meaningful analysis of either the causes or consequences of international migration. Third, the information on international flow of people obtained from population censuses, either through asking direct questions or indirectly using the census component methods, is usually incomplete and fragmented. Last, population census, by its very nature, cannot provide reliable information on emigration from a country.

27. Despite the limitations associated with population censuses in measuring international migration, they can be useful in providing information on the size and characteristics of international migrants. The above analysis shows that most national population censuses are adequate in capturing information on international migration through appropriate questions in the 2010 census round. Questions are mostly concentrated on the traditional United Nations core topics on international migration such as country of birth, citizenship and period/year of arrival in the country. Additional information is collected by some countries on emigration of former household members, returned migrants and country of birth of parents. The analysis also shows that one core question on internal migration – previous residence – have been asked by most countries and could also be used to derive certain information about immigrants in the past.

28. The key challenge that remains, therefore, is improving availability and accuracy of international migration statistics collected from population censuses. The first step in taking full advantage of population censuses is to tabulate the collected data and make them widely available. Figure 1 above shows that only 50 per cent of countries and areas have made their basic international migrant stock data available at international level, despite the fact that those information are collected in censuses. Data availability is even lower when tables are further disaggregated by country of origin (birth or citizenship), educational attainment and occupation. Secondly, for international migration data that are published less-frequently such as those on emigration, returned migrants and place of previous residence, not only should such data be made available to the public but also with accompanying documentations such as studies evaluating the quality and coverage of those data and information on how those data are used to inform policy makers.

29. Population censuses also have the potential in working with other data sources – sample surveys, administrative sources or other unofficial sources – to improve coverage, frequency and comprehensiveness of migration statistics. Further research and guidance in this area would be helpful.

Annex

List of countries and areas for which 2010 census questionnaires are analysed

Region	Country/area
Africa	Algeria
Africa	Botswana
Africa	Burkina Faso
Africa	Burundi
Africa	Cameroon
Africa	Cape Verde
Africa	Congo
Africa	Djibouti
Africa	Egypt
Africa	Ethiopia
Africa	Ghana
Africa	Guinea-Bissau
Africa	Kenya
Africa	Lesotho
Africa	Liberia
Africa	Malawi
Africa	Mali
Africa	Mauritius
Africa	Mayotte
Africa	Mozambique
Africa	Namibia
Africa	Nigeria
Africa	Réunion
Africa	Saint Helena
Africa	Seychelles
Africa	South Africa
Africa	Sudan
Africa	Swaziland
Africa	Togo
Africa	Zambia
America, North	Aruba
America, North	Bahamas
America, North	Barbados
America, North	Belize
America, North	Bermuda
America, North	Canada
America, North	Cayman Islands
America, North	Costa Rica
America, North	Curacao
America, North	Dominican Republic
America, North	El Salvador
America, North	Guadeloupe
America, North	Jamaica
America, North	Martinique

Region	Country/area
America, North	Mexico
America, North	Nicaragua
America, North	Panama
America, North	Puerto Rico
America, North	Saint Lucia
America, North	Saint Pierre and Miquelon
America, North	Sint Maarten (Dutch part)
America, North	Trinidad and Tobago
America, North	United States of America
America, North	United States Virgin Islands
America, South	Argentina
America, South	Bolivia (Plurinational State of)
America, South	Brazil
America, South	Colombia
America, South	Ecuador
America, South	French Guiana
America, South	Peru
America, South	Suriname
America, South	Uruguay
America, South	Venezuela (Bolivarian Republic of)
Asia	Afghanistan
Asia	Armenia
Asia	Azerbaijan
Asia	Bangladesh
Asia	Bhutan
Asia	Cambodia
Asia	China
Asia	Cyprus
Asia	Democratic People's Republic of Korea
Asia	Hong Kong SAR of China
Asia	India
Asia	Indonesia
Asia	Iran (Islamic Republic of)
Asia	Israel
Asia	Japan
Asia	Kazakhstan
Asia	Lao People's Democratic Republic
Asia	Macao SAR of China
Asia	Maldives
Asia	Mongolia
Asia	Nepal
Asia	Philippines
Asia	Qatar
Asia	Republic of Korea
Asia	Saudi Arabia
Asia	Singapore
Asia	Sri Lanka
Asia	State of Palestine
Asia	Tajikistan
Asia	Thailand

Region	Country/area
Asia	Timor-Leste
Asia	United Arab Emirates
Asia	Viet Nam
Europe	Albania
Europe	Belarus
Europe	Bosnia and Herzegovina
Europe	Bulgaria
Europe	Croatia
Europe	Czech Republic
Europe	Estonia
Europe	Faeroe Islands
Europe	France
Europe	Germany
Europe	Gibraltar
Europe	Greece
Europe	Hungary
Europe	Ireland
Europe	Isle of Man
Europe	Italy
Europe	Jersey
Europe	Latvia
Europe	Liechtenstein
Europe	Lithuania
Europe	Luxembourg
Europe	Malta
Europe	Monaco
Europe	Montenegro
Europe	Romania
Europe	Russian Federation
Europe	Serbia
Europe	Spain
Europe	Switzerland
Europe	United Kingdom of Great Britain and Northern Ireland
Oceania	American Samoa
Oceania	Australia
Oceania	Cook Islands
Oceania	Fiji
Oceania	French Polynesia
Oceania	Guam
Oceania	Kiribati
Oceania	Marshall Islands
Oceania	Micronesia (Federated States of)
Oceania	New Caledonia
Oceania	New Zealand
Oceania	Niue
Oceania	Norfolk Island
Oceania	Northern Mariana Islands
Oceania	Palau
Oceania	Samoa
Oceania	Solomon Islands

Region	Country/area
Oceania	Tokelau
Oceania	Tonga
Oceania	Vanuatu
Oceania	Wallis and Futuna Islands
